In re Appln. of NAKAGAWA et al. Application No. Unassigned

ABSTRACT AMENDMENTS

Replace the Abstract with:

A magnetic actuator includes a first yoke, an armature which is provided inside the first yoke and made movable in reciprocating motion along a first direction inside the first yoke, first and second coils fitted inside the first yoke, a pair of second yokes affixed to the first yoke along a second direction, and permanent magnets affixed to the second yokes in-a manner so that the permanent magnets are positioned face-to-face with the armature. In the magnetic actuator thus constructed, magnetic fluxes generated by the first and second coils pass through a first magnetic eircuits whereas fluxes circuit and magnetic flux generated by the permanent magnets pass passes through a second magnetic eircuits circuit differing from the first magnetic eircuits circuit.